

# Beyond *CSI*: careers in forensic science

When Louisiana authorities hit a stone wall in their search for a serial killer, they turned to DNAPrint genomics. Its DNAWitness forensics technology was used in the analysis of the killer's DNA lifted from several crime scenes. Viewers of a recent episode of Court TV's *Forensics Files* program, "Tight-Fitting Genes," saw — in a surprising twist — how DNAPrint's DNA analysis changed the course of the investigation and, ultimately, led to the capture of the killer — a man who, based on eyewitness accounts, no one would have suspected.

While the popular TV shows like *Forensics Files* and *CSI* have fascinated fans and glamorized the profession, these types of programs may have contributed to misconceptions about what forensic science can and cannot do. Employees of DNAPrint genomics Inc. in Sarasota, FL — primarily a developer of genomic-based products and services (i.e., drug development, pharmacogenomic diagnostic tests, forensics technology, and consumer genetic tests) — confirm that misconceptions exist among the general public about forensic science.

"Many people believe all cases have DNA and also that a case can be solved in a day. Both of these are untrue," says Shannon Boyd, currently a DNA analyst for DNAPrint genomics and formerly a forensic analyst at the National Forensic Science Technology Center.

According to James Crippen, the director of The Western Forensic Law Enforcement Training Center at Colorado State University-Pueblo, many students entering the study of forensic science do not realize that they may have to carry a weapon during crime-scene responses or be commissioned as a police officer, or even pick up dead bodies for removal to the morgue.

A realistic evaluation of forensic science as a potential career is essential before investing the time, energy, and money to complete a course of study. Boyd, who has a bachelor of science in forensic science and a minor in chemistry, says that potential forensic scientists should put a strong emphasis on studying math and sciences such as biology and chemistry, as well as technical writing. Having an inquisitive and analytical mind is also a key trait of the successful forensic scientist. Boyd says, "The person pursuing a forensic-science career should be the type of person who questions everything."

Another consideration for a potential student of forensics might be to consider what a "typical day" in the life of a forensic scientist involves. A forensic chemist will analyze drugs all day, while a DNA analyst may spend hours extracting, quantitating, and analyzing biological materials. The work performed is as varied as the list of specialty areas such as arson,

ballistics/firearms, crime-scene processing and photography, explosives, fingerprints, forensic archaeology and anthropology, and forensic chemistry/narcotics. Each of these fields requires a wholly different set of skills and involves a broad range of activities.



Photo courtesy of the Victims and the Media Program at the Michigan State University School of Journalism

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According to The American Academy of Forensic Scientists (visit [www.aafs.org](http://www.aafs.org) for Resources/Choosing a Career), the forensic scientist is solely responsible for the work he performs; no one else can testify to his opinion or write his scientific reports. Scientists work closely with police officers, sheriff's deputies, prosecuting and defense attorneys, DEA, CIA and FBI agents, immigration workers, and crime-scene investigators, to name a few. A forensic scientist's goal is the unbiased use of all available data in order to identify the facts, and ultimately, the truth.

Most importantly, a person looking to forensic science as a career path needs to know the drawbacks of the profession. Some of these are the possibility of having to move in order to secure a job; a lower-than-expected pay base — because most forensic labs tend to be financially limited — and the probability of a long wait from beginning as an intern (doing less "glamorous" jobs) to becoming a technologist and, finally, an analyst.

In a field as varied and interesting as medical laboratory technology, forensic science may be the one discipline that appears more challenging or interesting than others. But when considering forensic science as a lifelong pursuit, examining the details of such a choice is imperative. □